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We claim:

1. A process for the preparation of anionic clays wherein an aluminium source and a magnesium source are reacted in aqueous suspension to obtain an anionic clay, the aluminium source comprising two types of aluminium-containing compounds wherein one type of aluminium-containing compound is aluminium trihydrate or its thermally treated form.  
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2. A process according to claim 1 wherein the aluminium source comprises aluminium trihydrate.  
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3. A process according to claim 1 or 2 wherein the aluminium source comprises thermally treated aluminium trihydrate.  
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4. A process according to any one of claims 1-3 wherein the aluminium source comprises aluminium trihydrate and thermally treated aluminium trihydrate.  
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5. A process according to any one of claims 1-4 wherein the magnesium source is magnesium oxide and/or  $Mg(OH)_2$  and/or  $MgCO_3$ .  
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6. A process according to any one of claims 1-5 wherein the reaction takes place at a temperature between 0 and 100 °C at or above atmospheric pressure.  
7. A process according to any one of claims 1-8 wherein the reaction takes place at a temperature above 50 °C at or above atmospheric pressure.

8. A process according to any one of claims 1-9 wherein the reaction is conducted at a temperature above 100 °C and increased pressure.
9. A process according to any one of claims 1-10 wherein metals or non-  
5 metals are fed to the reactor.
10. A process according to claim 11 wherein the metals or non-metals are added to an aluminium source slurry.
- 10 11. A process according to claim 11 wherein the metals or non-metals are added to a magnesium source slurry.
12. A process according to any one of claims 1-11 wherein the anionic clay is subjected to an ion-exchange treatment.
- 15 13. A process according to any one of claims 1-12 wherein the anionic clay is ion exchanged with pillarating anions such as  $V_{10}O_{28}^{6-}$  and  $Mo_7O_{24}^{6-}$ .
14. A process according to any one of claims 1-13 wherein metals or non-  
20 metals are deposited on the anionic clay.
15. A process for the preparation of a Al-Mg-containing solid solution and/or spinel, wherein an anionic clay obtained by any one of the processes of claims 1-15 is subjected to a heat-treatment at a temperature between 300  
25 and 1200 °C.